

# VPX708

## LS1046A Processor, 3U VPX

### Key Features

- VPX 3U NXP Layerscape LS1046A (A72 Core)
- 8 GB DDR4 with ECC
- x8 PCIe Gen3 or dual x4 PCIe Gen3 to P1
- Dual 10GbE to P1
- Dual GbE to P1
- 64 GB of Flash
- Dual USB3.0
- Serial Over Lan (SOL)
- XMC site per VITA 42 and VITA46.9 for XMC I/O
- Conduction Cooled option available
- Health Management through dedicated Processor

### Benefits

- High single-threaded performance for compute-plane applications
- Embedded data path acceleration for network processing
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company



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# VPX708

The VPX708 is a Layerscape Processor in 3U VPX form factor based on the NXP LS1046A (quad core) processor. It has x8 PCIe Gen3 or Dual x4 PCIe Gen3 to P1. The module also has dual 10GbE, dual GbE, dual USB3.0 and dual RS-232 to P1.

The Unit has an XMC site and the XMC I/O is routed as X24s+X8d+X12d to P2.

The module provides Serial Over Lan (SOL) to access the module serial port over IP.

VPX708 comes with 8 GB of DDR4 memory with ECC, 128 MB NOR flash, 8 MB SPI flash, 512 KB I2C flash, and 64 GB of eMMC.

# Block Diagram

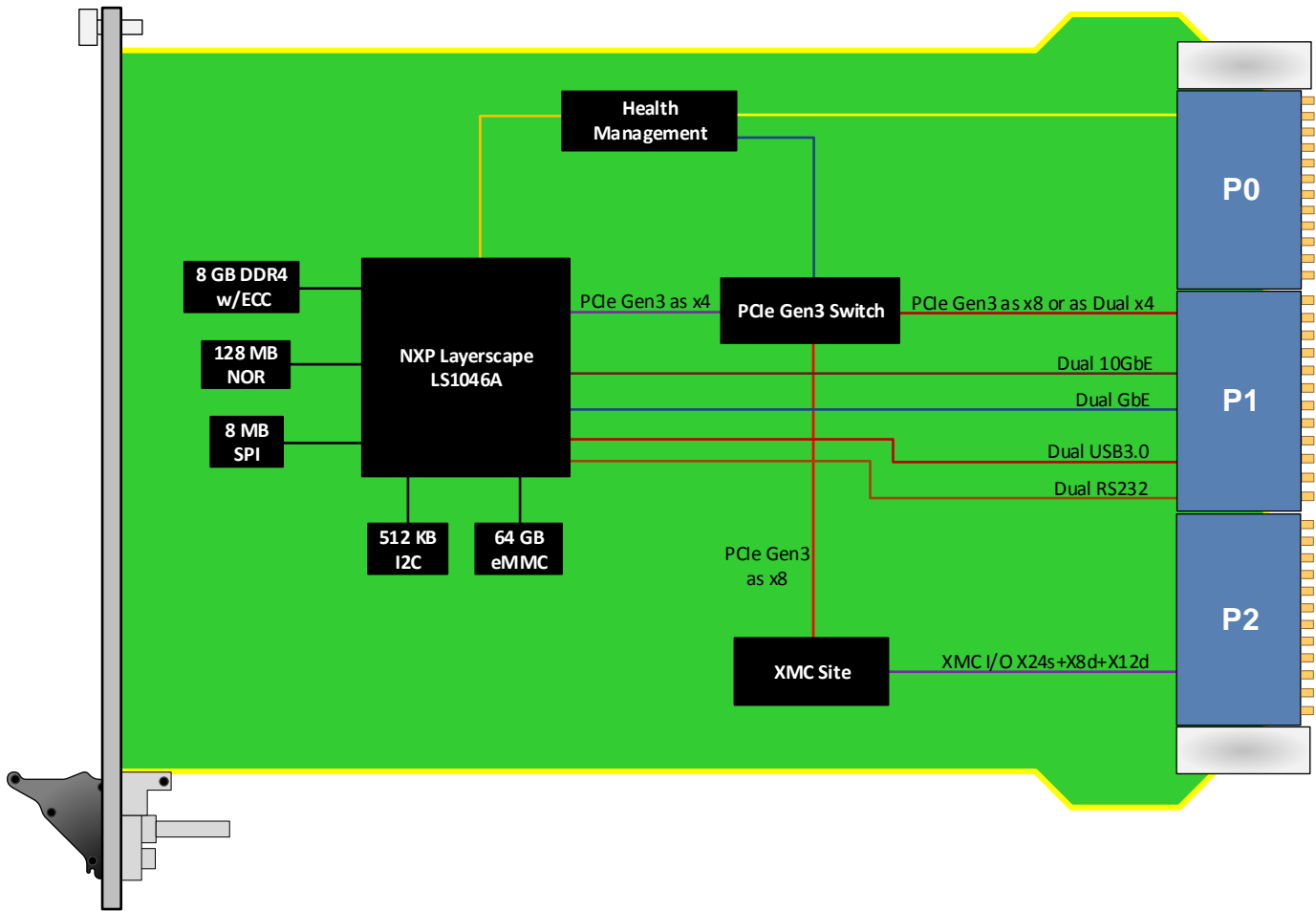


Figure 1: VPX708 Functional Block Diagram

# Specifications

Architecture		
<b>Physical</b>	<b>Dimensions</b>	3U VPX in 1" pitch
<b>Type</b>	<b>VPX Processor</b>	LS1046A (quad-core) processors
Standards		
<b>VPX</b>	<b>Type</b>	3U VPX
<b>Module Management</b>	<b>IPMI</b>	IPMI v2.0 with Tier 2 support
<b>PCIe</b>	<b>Lanes</b>	X8 PCIe Gen 3 or as dual x4 PCIe Gen3 to P1
Configuration		
<b>Power</b>	<b>VPX708</b>	~33W
<b>Environmental</b>	<b>Temperature</b>	See <a href="#">Ordering Options</a> Storage Temperature: -40° to +90°C
	<b>Vibration</b>	Operating 9.8 m/s <sup>2</sup> (1G), 5 to 500Hz on each axis
	<b>Shock</b>	Operating 325G/2 ms, 160G/1 ms
	<b>Relative Humidity</b>	5 to 95% non-condensing
<b>Rear I/O</b>	<b>P1</b>	Dual 10GbE and Dual 1GbE, Dual USB 3.0 and Dual RS-232
	<b>P2</b>	XMC Site
	<b>LEDs</b>	User defined by CPU and Health Management Activity/Link user LEDs
<b>Software Support</b>	<b>Operating System</b>	Linux and VxWorks
Other		
<b>MTBF</b>	MIL Hand book 217-F@ TBD hrs	
<b>Certifications</b>	Designed to meet FCC, CE and UL certifications, where applicable	
<b>Standards</b>	VadaTech is certified to both the ISO9001:2015 and AS9100D standards	
<b>Warranty</b>	Two (2) years, see <a href="#">VadaTech Terms and Conditions</a>	

## INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of OpenVPX, ATCA and MTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTMs), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

# Ordering Options

## VPX708 – ABC-000-GHJ

<b>A = CPU Speed</b> 0 = 1.8 GHz with Encryption 1 = Reserved		<b>G = Applicable Slot Profiles</b> 0 = 5 HP
<b>B = DDR4</b> 0 = 8 GB 1 = Reserved		<b>H = Environmental</b> See <a href="#">Environmental Specification</a>
<b>C = VPX Connector Type</b> 0 = Standard 50u Gold Rugged 1 = KVPX Connectors		<b>J = Temperature Range and Coating</b> 0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

## Environmental Specification

Option H	Air Cooled			Conduction Cooled	
	H = 0	H = 1	H = 2	H = 3	H = 4
<b>Operating Temperature</b>	AC1* (0°C to +55°C)	AC3* (-40°C to +70°C)	CC1* (0°C to +55°C)	CC3* (-40°C to +70°C)	CC4* (-40°C to +85°C)
<b>Storage Temperature</b>	C1* (-40°C to +85°C)	C3* (-50°C to +100°C)	C1* (-40°C to +85°C)	C3* (-50°C to +100°C)	C3* (-50°C to +100°C)
<b>Operating Vibration</b>	V2* (0.04 g2/Hz max)	V2* (0.04 g2/Hz max)	V3* (0.1 g2/Hz max)	V3* (0.1 g2/Hz max)	V3 (0.1 g2/Hz max)
<b>Storage Vibration</b>	OS1* (20g)	OS1* (20g)	OS2* (40g)	OS2* (40g)	OS2* (40g)
<b>Humidity</b>	95% non-condensing	95% non-condensing	95% non-condensing	95% non-condensing	95% non-condensing

Notes: \*Nomenclature per ANSI/VITA 47. Contact local sales office for conduction cooled (H = 2, 3, 4).

## Related Products

VPX004



- Unified 1 GHz quad-core CPU for, Shelf Manager, and Fabric management
- Automatic fail-over with redundant VPX004
- 1GbE base switch with dual 100/1000/10G uplink

VPX599



- 3U FPGA Dual ADC and Dual DAC per VITA 46
- Xilinx Kintex UltraScale™ XCKU115 FPGA
- Dual ADC 12-bit @ 6.4 GSPS or quad ADC at 3.2 GSPS with TI ADC12DJ3200

VTX870



- Open VPX benchtop development platform
- Dedicated Switch/management slot
- Up to five 3U VPX payload slots

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- Accelerated deployment
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